

## AIR REFRIGERANT TYPE REFRIGERATOR

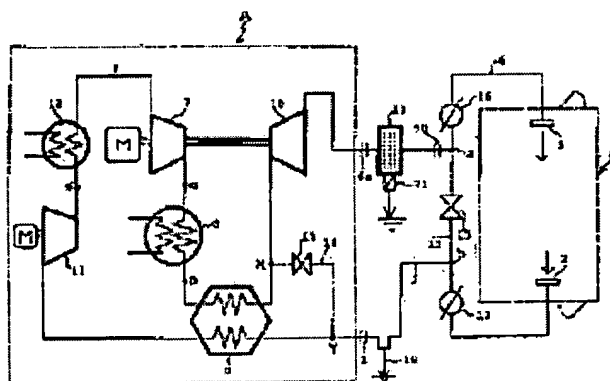
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### Abstract of JP11132582

**PROBLEM TO BE SOLVED:** To prevent the efficiency of a refrigerator from lowering due to moisture and floating substance mixed into the air while purifying the air when the air from a chamber required to be cooled is taken, as refrigerant, into an air refrigerant type refrigerator and the chamber is cooled by blowing cooled air directly from the refrigerator.

**SOLUTION:** The air refrigerant type refrigerator comprises a compressor 7, an air cooler 8, an air to air heat exchanger 9 and an expansion unit 10 arranged in an air passage and the air in a chamber B required to be cooled is taken into a compressor 7 through the heat exchanger 9 before being blown into the chamber B from the expansion unit 10. The refrigerator further comprises a first bypass 13 provided with a valve for returning the air from the expansion unit 10 partially or entirely back to the heat exchanger 9 while bypassing the chamber B, a hot air bypass 14 provided with a valve for taking in the air of 0 deg.C or above from the air passage between the compressor and the expansion unit and supplying the air to the inlet side of the heat exchanger 9, or a hot air bypass for taking in high temperature compressed air from the air passage between the compressor and the expansion unit before entering into the air cooler 8 or the air heat exchanger 9 and supplying the air to the air passage on the inlet side of the expansion unit.



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